

Appl. No. 10/748,734
Amdt. Dated October 17, 2007
Reply to Office Action of July 18, 2007

Attorney Docket No. 88519.0001
Customer No.: 26021

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-3. (Canceled)

4. (Currently Amended) An electrode structure comprising:
a transparent electrode including ZnO; and
an Mg-doped ZnO film ~~formed on disposed on a light emission side of an outer surface of the electrode that is opposite to a substrate of a semiconductor device,~~
wherein the electrode is ~~a component of disposed on a~~ ~~the~~ semiconductor device.

5. (Currently Amended) An electrode structure comprising:
a transparent electrode including ZnO; and
an Mg-doped ZnO film ~~formed on disposed on a light emission side of an outer surface of the electrode that is opposite to a substrate of a semiconductor device,~~
wherein the electrode is ~~a component of disposed on a~~ ~~the~~ semiconductor device, and
the semiconductor device includes GaN.

6. (Previously Presented) The electrode structure of Claim 4, wherein the Mg-doped ZnO film overlies an upper surface of the electrode.

7. (Canceled)

8. (Previously Presented) The electrode structure of Claim 4, wherein a first metal pattern is formed on the Mg-doped ZnO film.

9. (Previously Presented) The electrode structure of Claim 4, wherein the electrode is disposed on a semiconductor layer of the semiconductor device, and a second metal pattern is formed on the semiconductor layer.

10. (Previously Presented) The electrode structure of Claim 4, wherein the Mg-doped ZnO film improves acid resistance of the transparent electrode.

11. (Previously Presented) The electrode structure of Claim 4, wherein the electrode is disposed on a semiconductor layer of the semiconductor device, and the semiconductor layer is formed on a substrate.

12. (Canceled).

13. (Currently Amended) A light emitting device comprising:
a semiconductor layer formed on a substrate of a semiconductor device;
a ZnO transparent electrode formed on the semiconductor layer; and
an Mg-doped ZnO film formed on disposed on a light emission side of an outer surface of the ZnO transparent electrode that is opposite to the substrate,
wherein the semiconductor layer comprises a GaN system semiconductor layer.

14. (Currently Amended) A light emitting device comprising:
a semiconductor layer formed on a substrate of a semiconductor device;
a ZnO transparent electrode formed on the semiconductor layer; and
an Mg-doped ZnO film formed on disposed on a light emission side of an outer surface of the ZnO transparent electrode that is opposite to the substrate,
wherein the semiconductor layer comprises an n-type GaN system semiconductor layer formed on the substrate, an emission layer formed on the

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n-type GaN system semiconductor layer, and a p-type GaN system semiconductor layer formed on the emission layer.

15. (Previously presented) The light emitting device of Claim 13, wherein the Mg-doped ZnO film overlies an upper surface of the ZnO transparent electrode formed on the semiconductor layer.

16. (Canceled).

17. (Previously presented) The light emitting device of Claim 13, wherein a first metal pattern is formed on the Mg-doped ZnO film.

18. (Previously presented) The light emitting device of Claim 13, wherein a second metal pattern is formed on the semiconductor layer.

19. (Previously presented) The light emitting device of Claim 13, wherein the Mg-doped ZnO film improves acid resistance of the light emitting device.

20-25. (Canceled).

26. (New) The electrode structure of Claim 4, wherein the semiconductor layer is formed on the substrate that is different from the semiconductor layer.